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AUTHOR Belanger, Charles H.; Lavallee, Lise
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ABSTRACT

The way that inflation has created pressure points on quantity of resources and quality of outcomes in postsecondary education is examined, along with the situation of the chemistry department of the University of Montreal. Data from the chemistry department for 1971-80 are used to assess the impact of inflation on various objects of expenditures and to explore scenarios that are likely to hinder or save quality and vitality. A percentage breakdown of operating expenses and a composite price index for each of five major expenditure items were calculated: salaries and benefits, travel and entertainment, supplies, services, and maintenance and equipment. It was found that in the last nine years the total operating expenses of the University of Montreal have more than tripled compared with fiscal base year 1971-72. During the same period, the growth rate of salary money was slightly higher than that of the total expenses and of any single expenditure subcategory. For the chemistry department, indices were generally lower than those arrived at for the institution, with the exception of the services and maintenance and equipment subcategories. However, it is noted that inflation was the main factor in the evolution of chemistry indices, whereas not only rising costs but also substantial growth must be considered at the institutional level. While salary and benefit money are expected to occupy about 80 percent of the institutional operating expenses and inflation will continue to erode the limited maneuver margin contained in the remaining 20 percent, the most promising scenario to preserve the current level of quality appears to be a systematic and sustained effort through priority setting and continued monitoring or workloads, section size, and other areas. A bibliography is appended. (SW)

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INFLATION IS PRICING OUT QUALITY

Charles H. Bélanger
Director
Office of Institutional Research
Université de Montréal
Case postale 6128, Succursale A
Montréal, Québec
Tel. (514) 343-6155

and

Lise Lavallée
Research Economist
Office of Institutional Research
Université de Montréal
Case postale 6128, Succursale A
Montréal, Québec
Tel. (514) 343-6155

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THE ASSOCIATION FOR INSTITUTIONAL RESEARCH

This paper was presented at the Twenty-First Annual Forum of the Association for Institutional Research held at the Leamington Hotel in Minneapolis, Minnesota, May 17-20, 1981. This paper was reviewed by the AIR Forum Publications Committee and was judged to be of high quality and of interest to others concerned with the research of higher education. It has therefore been selected to be included in the ERIC Collection of Forum Papers.

Mary Corcoran
University of Minnesota
(Editor, AIR Forum Publications)

ABSTRACT

Universities are facing an almost insoluble problem: they want to enhance quality and vitality in the years ahead with a diminishing maneuvering range brought about by an ever-increasing proportion of money being almost automatically committed to salaries while the shrinking remainder, so-called other expenses, is being eaten up by inflation. This study examines the pressure points being created on the budget allocation and presents the case of the Chemistry Department. It also suggests various scenarios which almost inevitably lead to a decrease of quality.

INFLATION IS PRICING OUT QUALITY

The purpose of this paper is to examine how inflation has created pressure points on quantity of resources and quality of outcomes in post-secondary education. Institutions have been faced for some time with an almost insoluble problem which consists of enhancing quality and vitality while an ever-increasing proportion of available money is being automatically committed to salaries and benefits. These paradoxal trends are a direct threat to the continuation of certain services and expenditures essential to maintain and upgrade the quality of the product.

This study uses factual data of the Chemistry Department a) to assess the impact of inflation on various objects of expenditures, b) to determine how these inflationary pressures jeopardize quality; and c) to explore scenarios which are likely to hinder or salvage quality and vitality.

REVIEW OF LITTERATURE

Difficult financial conditions in postsecondary institutions have now prevailed for a number of years and no signs of relief are yet at sight. While the recent Higher Education Price Index showed its largest one-year increase (9.9%) of the last two decades in the United States (Magarrell, 1980) consumer prices rose even more sharply (13.3%) and faculty salaries lagged considerably (7.1%). Other industrialized nations whose dynamism is directly tied to the American economic scene have been having their problems too: Canada has lived with an inflation rate in the neighborhood of 10-12% (Statistics Canada, 1980), Britain has endured the hardship of general inflation running at about 25-30% (Perkin, 1975), and most others have not fared any better.

Amidst these rising cost pressures, colleges and universities have had to adapt to a number of academic and economic new realities (Stadtman, 1980) to make sure that a static or shrinking resource base would not cause irreparable damage. Many ideas have been aired to soften the impact of inflation and improve the managerial style of institutions. Some saw solutions in increasing university productivity (Sommers, 1977) and monitoring faculty salary resources (Bolte and Coleman, 1978); others insisted that more attention be paid to budget preparation and inflation prediction to make more rational decisions (Navin and Magura, 1977; Garcia, 1978). Academic programs have also been looked at with a magnifying glass (Harcleroad, 1980; Munitz and Wright, 1980) in an attempt to phase out, trim, and refocus activities that had become unproductive and obsolescent. Undeniably, some of these adaptations have been more painful than others, but the on-going chronic funding gap has not been entirely detrimental since it has added supplemental impetus to sound management policies.

How long can this skimming process last without affecting the quality and vitality of the institutions and their activities is a difficult question to answer. However, it sounds ironic to hear more and more calls for improving quality (Robl, Karman, and Boggs, 1976; Adams and Krislov, 1978) when one considers the fact that quantity was once the primary criterion for quality. At the 1980 annual meeting of the Society for College and University Planning, it was both refreshing and chilling to hear Clark Kerr state that the 1980s will be a decade where institutions will have to consolidate quality. This paper examines whether this idea of increasing quality has a fighting chance to be implemented given the current economic conditions and what price will have to be paid by institutions.

METHODOLOGY

Three major steps were involved in the collection and treatment of the data. First, it was necessary to reconstruct the financial picture of the University and that of the Department of Chemistry by object of expenditure for fiscal years 1971 through 1980. Compensatory components - wages, salaries, and employee benefits - were kept separate from noncompensatory items - travel and entertainment, instructional supplies, professional, contractual, and public services, and maintenance, equipment, and other goods.

Second, a composite price index for each of the five major expenditure items selected was calculated. A point of interest was to compare the composite indices of the institution with those of its Department of Chemistry. Therefore, no elaborate efforts were made to establish relationships between the Consumer Price Index of all the various goods contained in the market basket of the University and those of the Department of Chemistry with the notable exception of the Chemistry instructional supplies which were judged as a crucial subcategory. It was recognized that this more time-consuming procedure would have been preferable, but given time and resource constraints, it was not actively pursued. In order to nullify the possible biaises often introduced by a base year that was either too low or too high for a number of historical reasons, several semi-logarithmic graphs were also drawn; the rather cumbersome format of these graphs coupled with the additional information they failed to show, did not justify their inclusion in this paper.

Third, it was thought useful and informative to obtain a percentage breakdown of the operating expenses to show the relative magnitude of the subcategories and the variation between institutional and departmental figures.

RESULTS

The dollar figures presented in Table 1 indicate that in the last 9 years, the total operating expenses of the University of Montreal have more than tripled to reach an index of 323 when compared with fiscal base year 1971-72. During the same period, the growth rate of salary money was slightly higher (350) than that of the total expenses and of any other single expenditure subcategory (Table 2). As for the Department of Chemistry, there is a widespread range among the various expenditure subcategories; with the exception of the services and maintenance and equipment subcategories, indices are generally lower than those arrived at for the institution. However, a word of caution is necessary to avoid making meaningless comparisons. In the last decade, the institutional headcount enrollment went from 18 000 to 28 000 students and the academic staff almost doubled. In the same time span, the Department of Chemistry kept about the same cruising speed in terms of academic and non-academic positions and student enrollment. Therefore, it can be ascertained that inflation was the main factor in the evolution of Chemistry indices whereas not only rising costs but also substantial growth must be accounted for at the institutional level. Moreover, the small numbers of the base year for Chemistry services and maintenance and equipment contributed to phenomenal increases of the indices; for that specific reason, the magnitude of the indices should not be overestimated.

A rapid overview of Table 3 reveals that employee salary and benefit money occupied 73.3% of the total university operating expenses in 1971 as opposed to 79.5% in 1980; this represents an increase of 6.2% that had to be squeezed out of the other expenditures. In Chemistry, the percentage being taken up by compensatory items remained about the same over the years although

TABLE 1

OPERATING EXPENSES 1971-1980

$000

	year	salaries & benefits	other expenditures					TOTAL
			travel & entertainment	supplies	services	maintenance & equipment	total	
University of Montreal	1971-72	36 477	667	2 982	4 840	4 759	13 248	49 725
	1975-76	73 600	1 148	5 443	7 605	6 918	21 114	94 714
	1979-80	127 582	1 642	6 900	15 758	8 830	33 130	160 712
Department of Chemistry	1971-72	743	6	100	3	5	114	857
	1975-76	1 263	11	145	14	17	187	1 450
	1979-80	1 810	14	218	47	24	303	2 113

TABLE 2

OPERATING EXPENSES 1971-1980

Indexes (base year = 1971)

	year	salaries & benefits	other expenditures					TOTAL
			travel & entertainment	supplies	services	maintenance & equipment	total	
University of Montreal	1971-72	100	100	100	100	100	100	100
	1975-76	202	172	183	157	145	159	190
	1979-80	350	246	231	326	186	250	323
Department of Chemistry	1971-72	100	100	100	100	100	100	100
	1975-76	170	183	145	467	340	164	169
	1979-80	244	233	218	1567	480	266	247

TABLE 3

EXPENSES DISTRIBUTION 1971-1980

Percentages (%)

	year	salaries & benefits	other expenditures					TOTAL
			travel & entertainment	supplies	services	maintenance & equipment	total	
University of Montreal	1971-72	73.3	1.4	6.0	9.7	9.6	26.7	100.0
	1975-76	77.8	1.2	5.7	8.0	7.3	22.2	100.0
	1979-80	79.5	1.0	4.2	9.8	5.5	20.5	100.0
Department of Chemistry	1971-72	86.7	0.7	11.7	0.3	0.6	13.3	100.0
	1975-76	87.1	0.7	10.0	1.0	1.2	12.9	100.0
	1979-80	85.7	0.7	10.3	2.2	1.1	14.3	100.0

TABLE 4

OTHER EXPENDITURES 1971-1980

Percentages (%)

	year	travel & entertainment	supplies	services	maintenance & equipment	total
University of Montreal	1971-72	5.1	22.5	36.5	35.9	100.0
	1975-76	5.4	25.8	36.0	32.8	100.0
	1979-80	5.0	20.8	47.6	26.6	100.0
Department of Chemistry	1971-72	5.3	87.7	2.6	4.4	100.0
	1975-76	5.9	77.5	7.5	9.1	100.0
	1979-80	4.6	71.9	15.5	8.0	100.0

the proportion of the budget attributed to salaries and benefits was considerably higher than that of the institution as a whole.

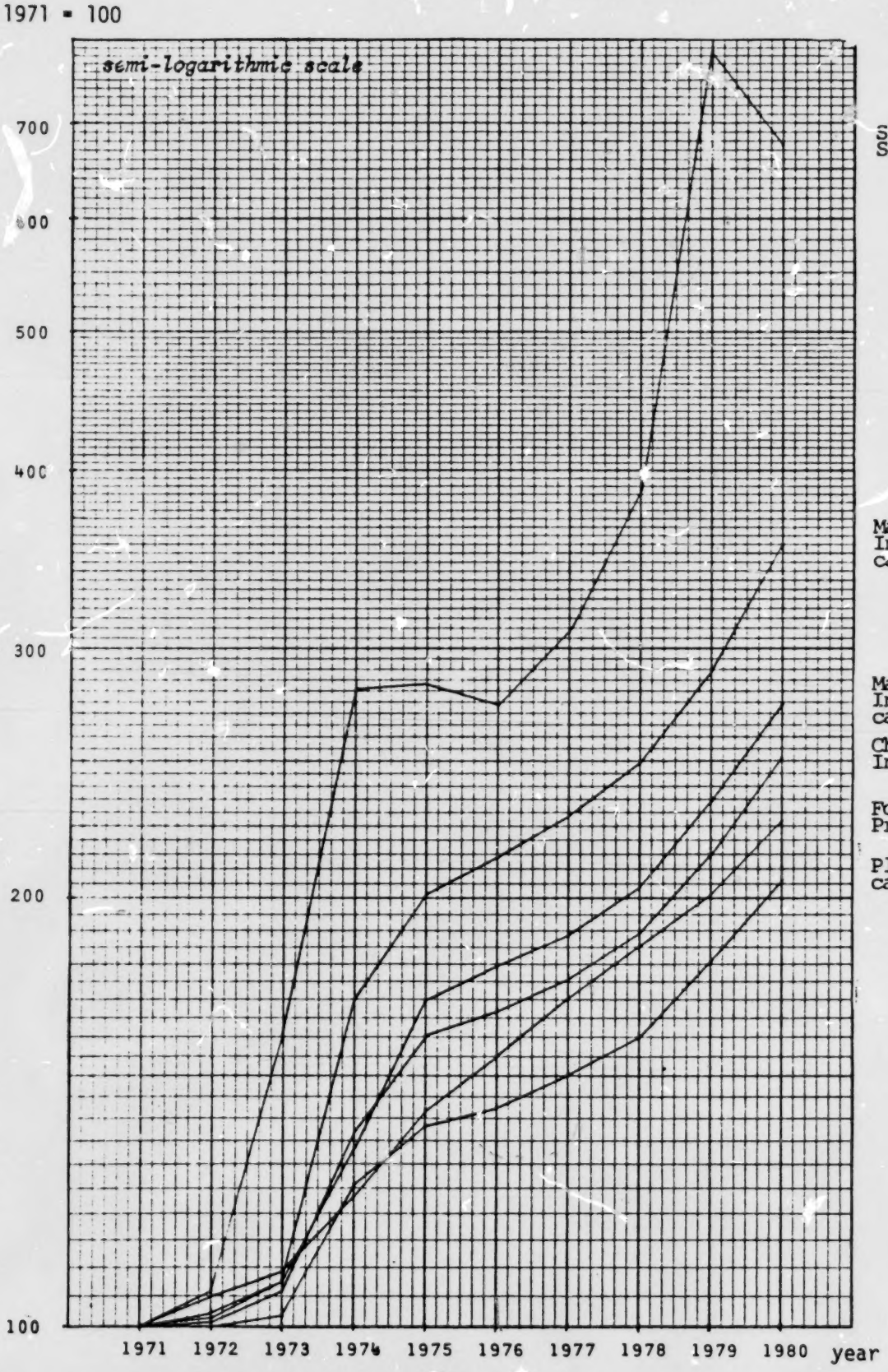
Relative percentages calculated across the four other expenditures subcategories (Table 4) showed significant differences between the percentage distribution within the University and that of the Chemistry Department. Instructional supplies, as one would have expected, occupy a large portion of the other expenditures budget in Chemistry, and play a vital role in providing students with first-hand experience with chemical products. Figure 1 shows the substantial increases of the industry selling price indexes of some products heavily used in Chemistry. As mentioned previously, there has also been quite a noticeable increase in professional, contractual, and public services. To some degree, the various goods contained in the institutional services market basket differ from a departmental sample, since it also includes, as examples, services as heterogeneous as outside consultant fees, building repair expenditures, and snow removal. Other services, such as utilities, are charged to the various units.

Analysis of the results

A brief overview of the results gives the perspective of difficult decisions looming ahead in the context of a decreasing maneuver margin at the institutional and departmental levels. On the one hand, the institution must continue to pay a higher price for items such as fuel, snow removal, electricity, and other goods and services; on the other hand, salaries and fringe benefits continue to take a higher proportion of available money. Departments such as Chemistry, where services and supplies are quite substantial in the preparation of students see themselves caught up in this vicious circle. A number of ideas can be set forth in an attempt to break this deadlock; some are rather sim-

Figure 1

INDUSTRY SELLING PRICE INDEXES



plistic and idealistic while others can be worked out with the full knowledge that if they are not, quality and vitality will decrease to a degree acute enough to jeopardize the very existence of the institution.

The most obvious scenario, although highly unrealistic, would be to wish for tenure to be abolished, for collective bargaining to disappear, and for inflation to cool down. All this, of course, is wishful thinking. The Carnegie Council Surveys (1978) reported that only about 100 institutions had abolished tenure since 1969-70 and that no more than 62 had any intent to abolish it by 1985-86. In the last decade, tenure's critics and defenders have had every opportunity to be heard; still, it seems that the institution of tenure itself is not in great danger, as most people would see its abolition as "instant tenure" for everyone. As for collective bargaining, the same source also reported that there was a steady trend toward faculty unionism particularly in public institutions while the private one had not yet been penetrated; however, faculty attitudes are, on the whole, favorable to collective bargaining because more decisions about the working conditions are being made by coordinating agencies; because part-time faculty members are competing with full-time faculty members for teaching assignments; and because, in times of economic difficulty, decisions made by administrators have a tendency to be seen as more oppressive and arbitrary. Finally, inflation is expected to remain in the double digit area for quite a foreseeable future, by most experts' analysis.

A second scenario, which is one that could materialize, would be for the University not to define clearly its priorities and for the Department of Chemistry not to have the necessary resources and means to avoid sinking into mediocrity. Times of retrenchment are periods for making choices, for pruning,

redirecting, and phasing out programs and activities that have become obsolete, marginal, and unproductive. It appears that the institution has a data base extensive enough for identifying the weak and strong areas. Thus far, the policy has been to overcome personnel management constraints by freezing vacant positions and cutting back on part-time staff; also, other expenses are being reduced by percentages up to 10% on last year's budget base. In the academic sector, the strategy used by the University administrators is to decentralize at the School and College level and let the deans judge the needs of each unit.

The implications of the institutional policies and strategy for a department which has a senior and heavily tenured-in faculty, which needs a considerable amount of instructional and research supplies, and which is vital to the integrity and quality of the institution and the College of Arts and Sciences, are enormous. First, decentralization might constitute an attractive weapon in that it not only brings the decision-making process closer to where the action is but it also puts pressure on the College administration to distribute scarce money in an even-handed manner. This spirit of fairness is bound to benefit less productive and essential units at the expense of fundamental disciplines which are being hit hard by inflation. Second, it might discourage the Department of Chemistry to make special efforts to market the profession and to attract as many incoming students as space and personnel would warrant it. Currently, there are no great incentives for the Department to go out of its way to recruit students because it has little influence on its budget allocation; moreover, the lower the clientele it receives, the less money it costs in instructional supplies and services of all kinds. In fact, the declining enrollment of the last three years has probably helped the Department to contain the cost of its other expenditures and to maintain high

quality standards. This downtrend cannot continue forever as it is bad business for the institution. It must also be noted that at the same time as a population decline was recorded, the Department had to cancel and switch around a number of experiments because the cost of certain chemicals had become prohibitive. It seems that graduate students were the ones who suffered the most from this decreasing maneuver margin, because it is difficult to substitute products in specialized research and, moreover, the higher degree of purification of the products makes them more costly. Third, a freeze on vacant positions can and will endanger the vitality of certain discipline elements as there will be a risk of having no strong key specialists or leaders to cover whichever discipline element is affected by a vacancy.

The third and most desirable scenario would have the institution set its priorities, make them known, and monitor and review the joint commitment to and from the appropriate academic units. There is no doubt that the institution and its departments must do much more to market its academic programs and areas of excellence to prospective students and the community at large. Interest in the retention rate has never been very high either since there were plenty of applicants; these conditions have changed. The University must not only continue to monitor teaching workloads, section size, salary resources, and so on, but it must undertake the crucial task of spelling out what is essential and accessory, as well as the conditions within which these activities should be conducted.

These predicaments are no guarantee for improving quality because salary and benefit money will continue to occupy about 80% of the institutional operating expenses while inflation will keep eroding the already limited maneuver margin contained in the remaining 20%. On the basis of the data presented in

this paper, the authors come to the conclusion that only a systematic and sustained effort to improve quality will at best preserve the current level of quality.

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